United States Patent [19]

Ruth, Jr.

[11] **Patent Number: 4,525,941**

[45] **Date of Patent: Jul. 2, 1985**

[54] **MUD WALKER**

[76] Inventor: **George F. Ruth, Jr.**, 101 Haussler Rd., Kelso, Wash. 98626

[21] Appl. No.: **572,536**

[22] Filed: **Jan. 20, 1984**

[51] **Int. Cl.**[3] **A43B 5/04**
[52] **U.S. Cl.** **36/116**
[58] **Field of Search** 36/116, 7.5

[56] **References Cited**

U.S. PATENT DOCUMENTS

683,595	10/1901	Drouillard	36/116
1,266,492	5/1918	Kurrell et al.	36/116 X
2,367,219	1/1945	Kearny	36/116 X
2,412,474	12/1946	Paine et al.	36/116 X
2,430,466	11/1947	Hedman	36/116 X
2,720,714	10/1955	Krohn et al.	36/116 X
3,423,852	1/1969	Smith	36/7.5
4,447,969	5/1984	Johnson	36/116

Primary Examiner—Louis K. Rimrodt
Attorney, Agent, or Firm—Lee R. Schermerhorn

[57] **ABSTRACT**

A platform is supported around the periphery of its under surface by a pneumatic tube cushion secured to the platform by strap loops. The top side of the platform is equipped with adjustable means of securement to the shoe or boot of the user. Vent holes in mid portions of the platform prevent suction effects under the platform when the foot is lifted. The device is collapsible into a compact package for shipment or storage.

10 Claims, 7 Drawing Figures

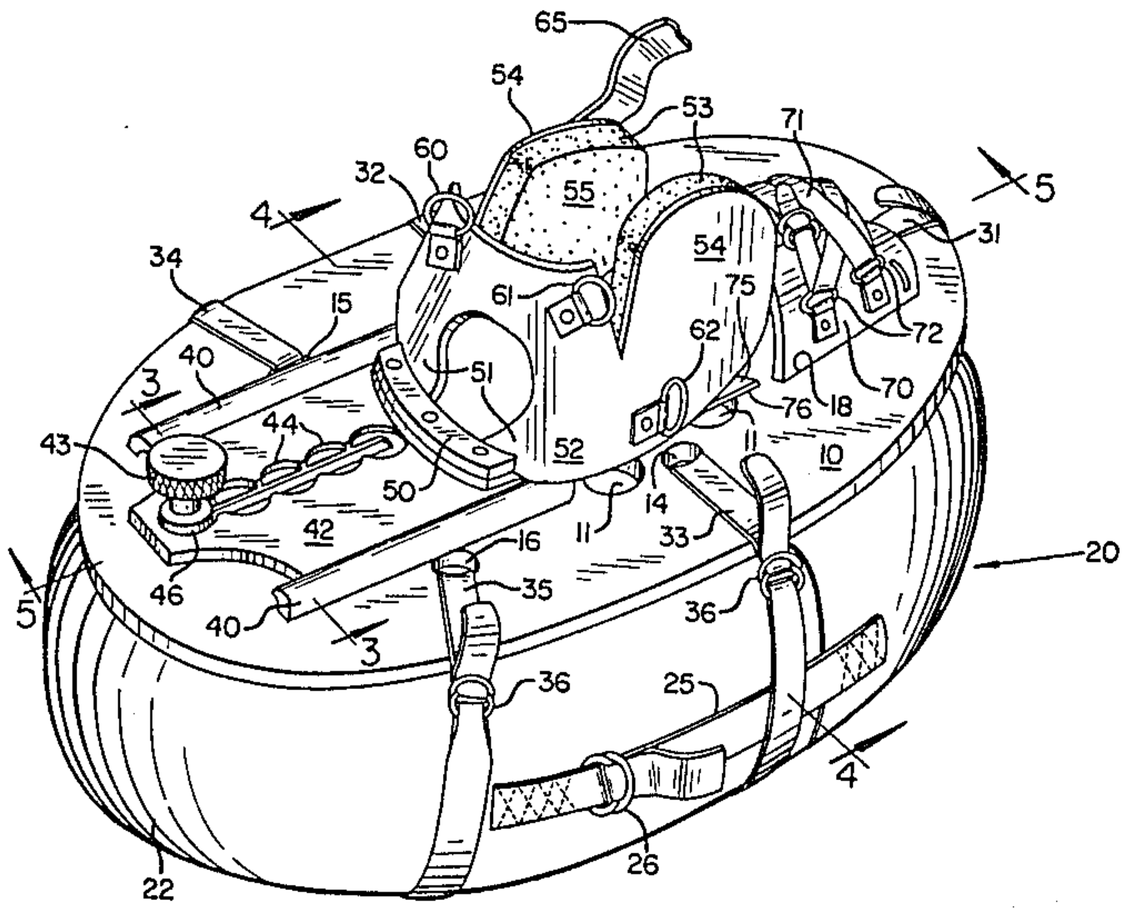


FIG. 1

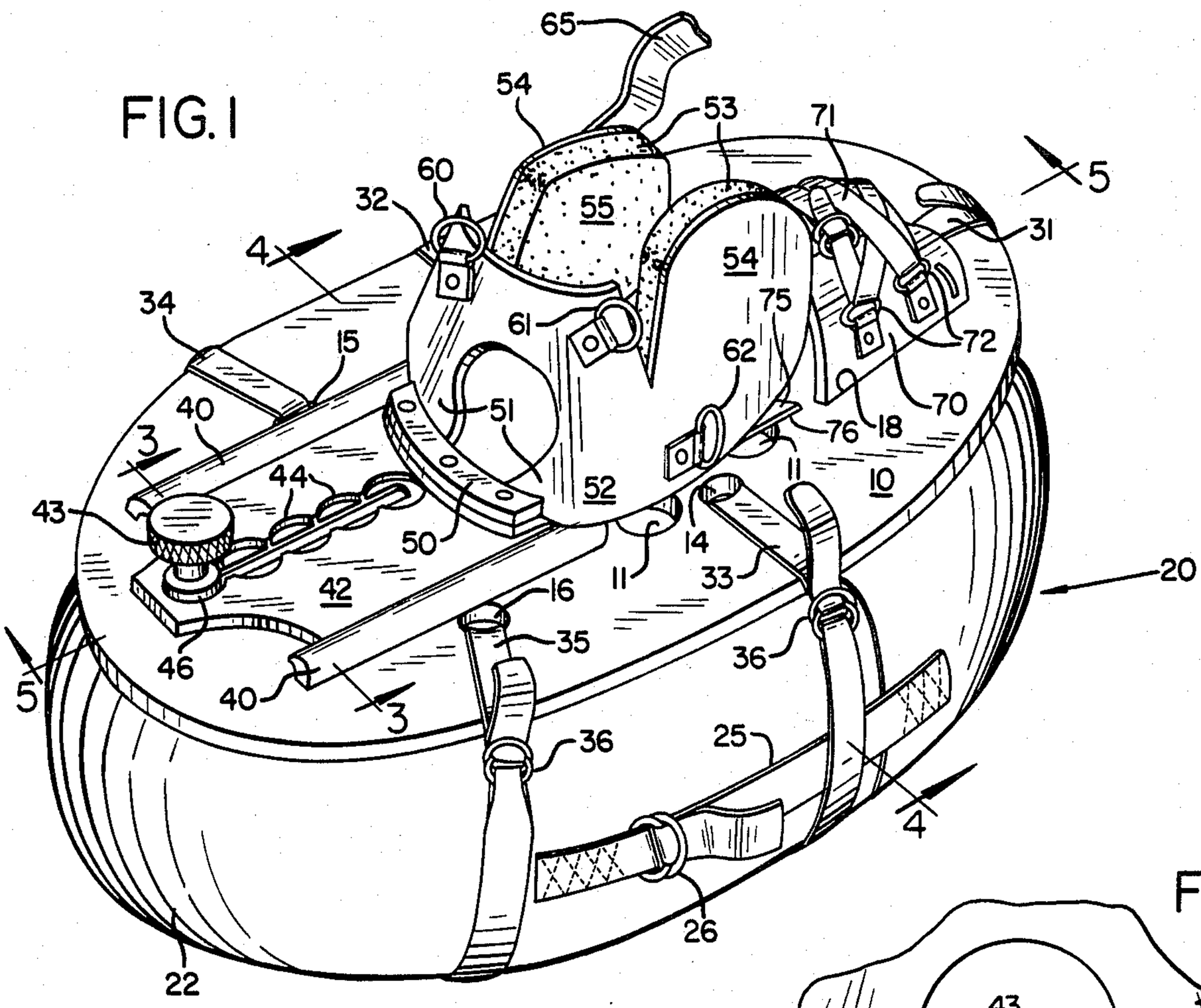


FIG. 3

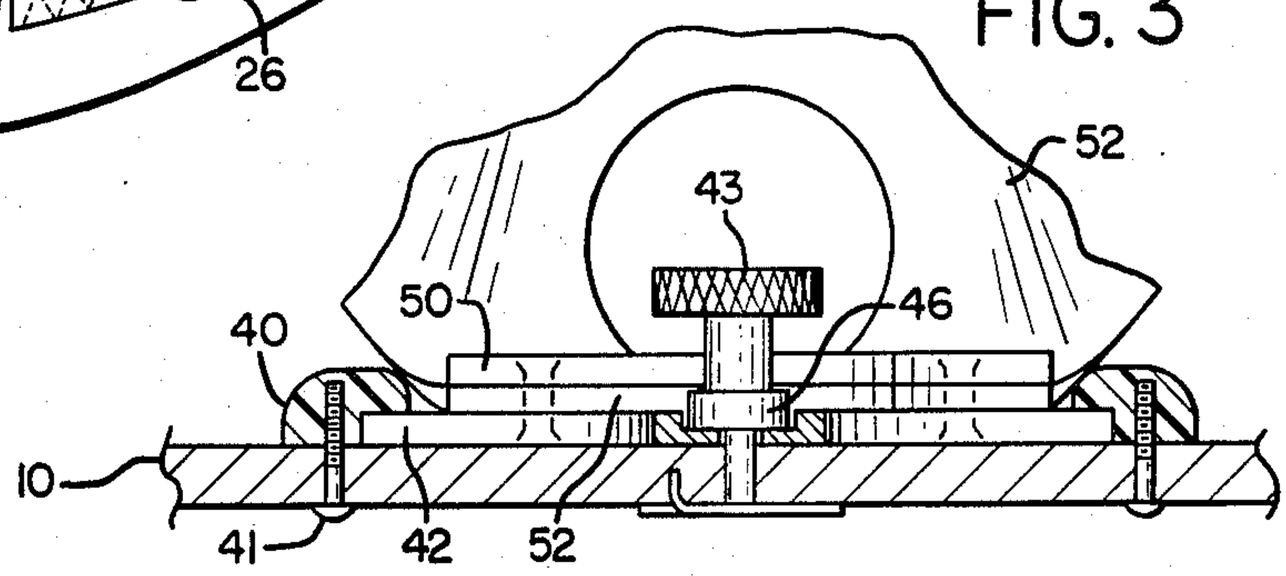


FIG. 2

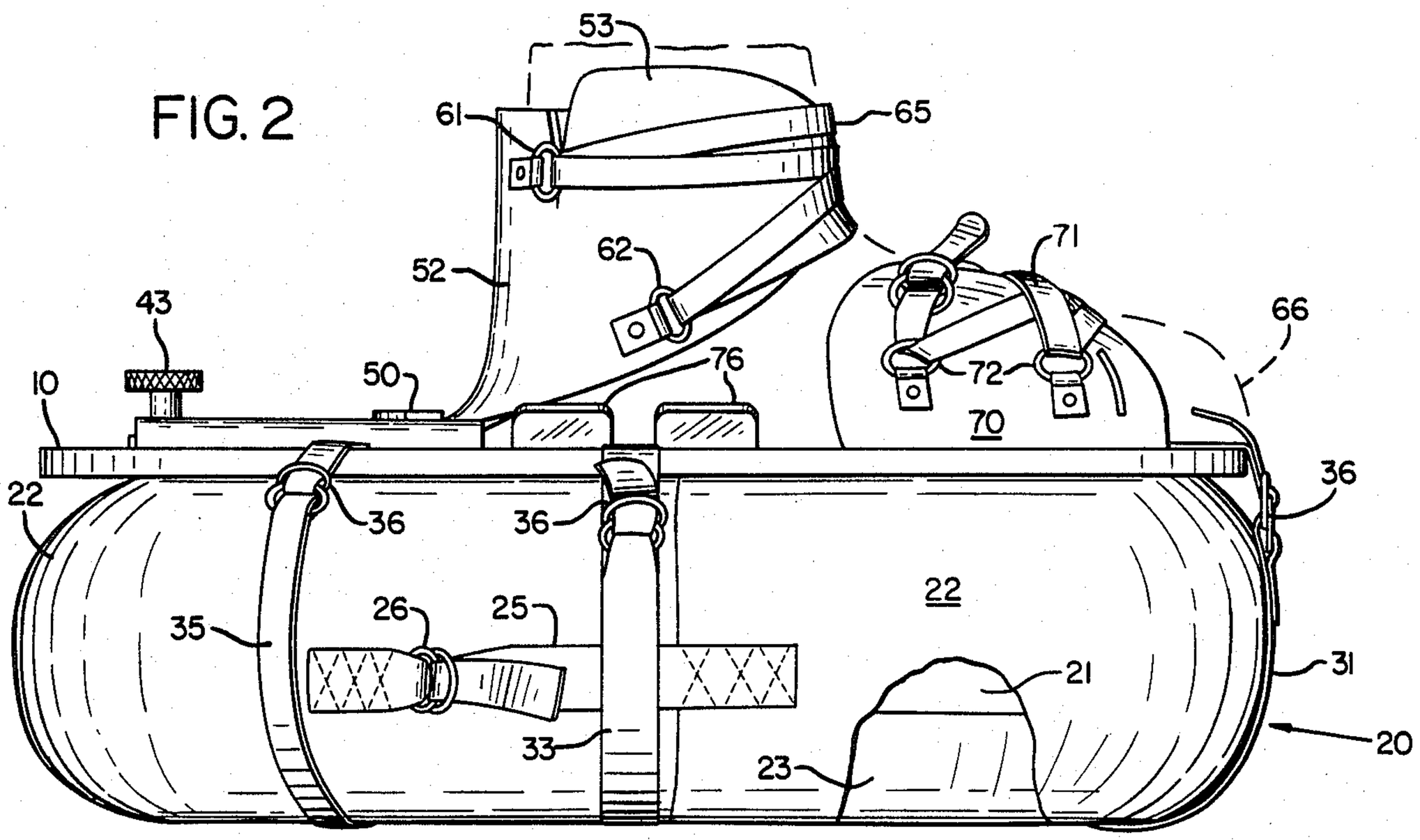


FIG. 4

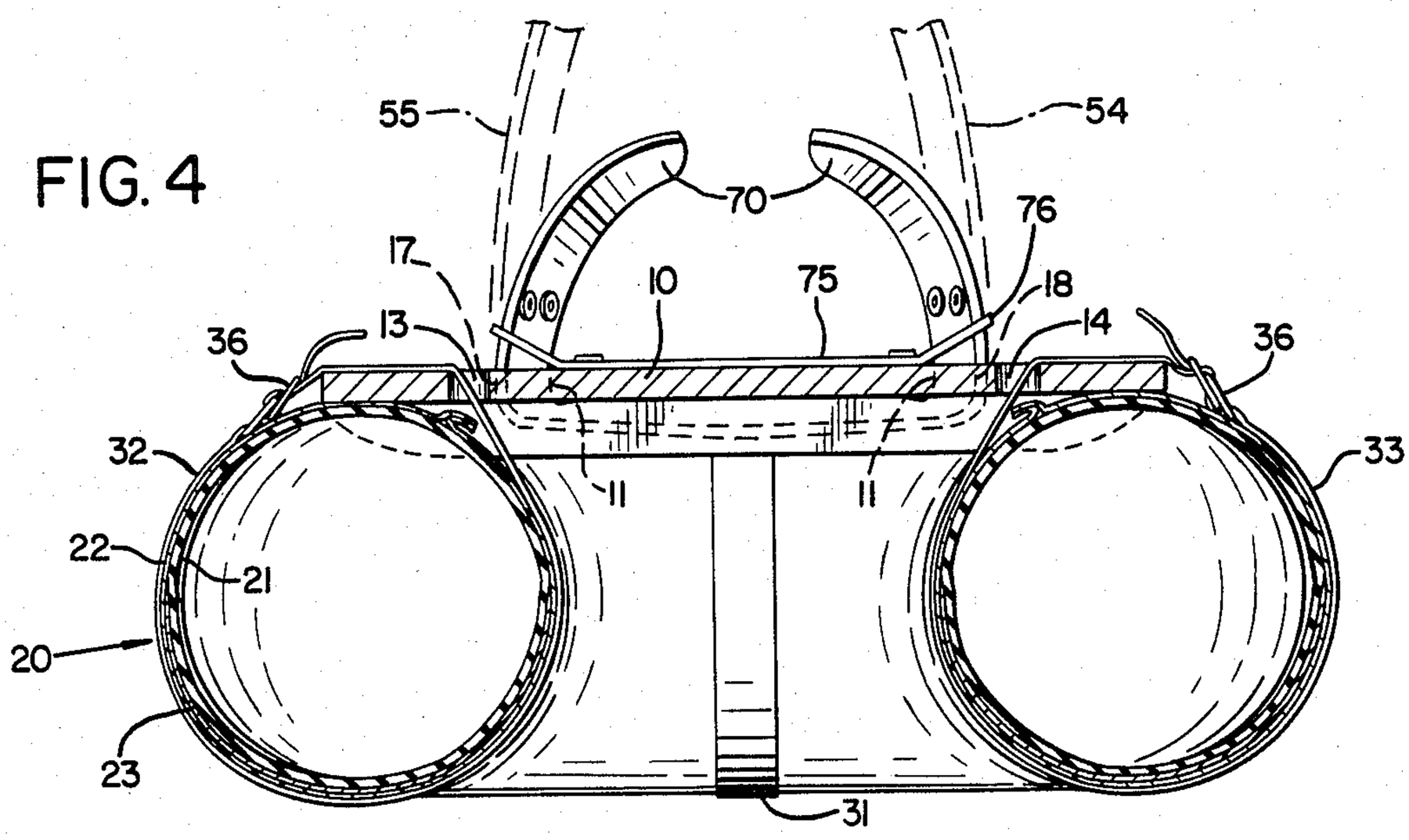


FIG. 5

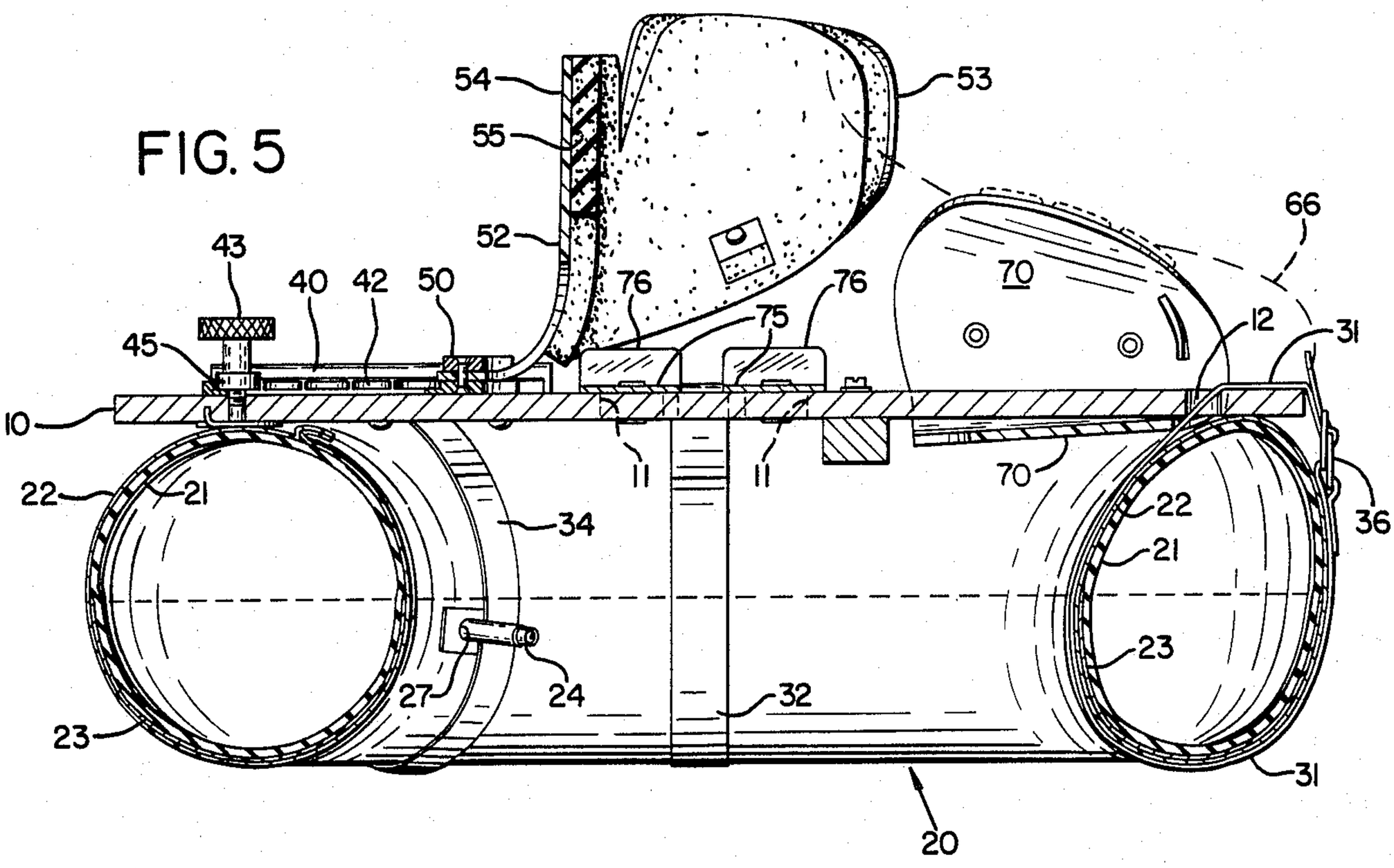


FIG. 6

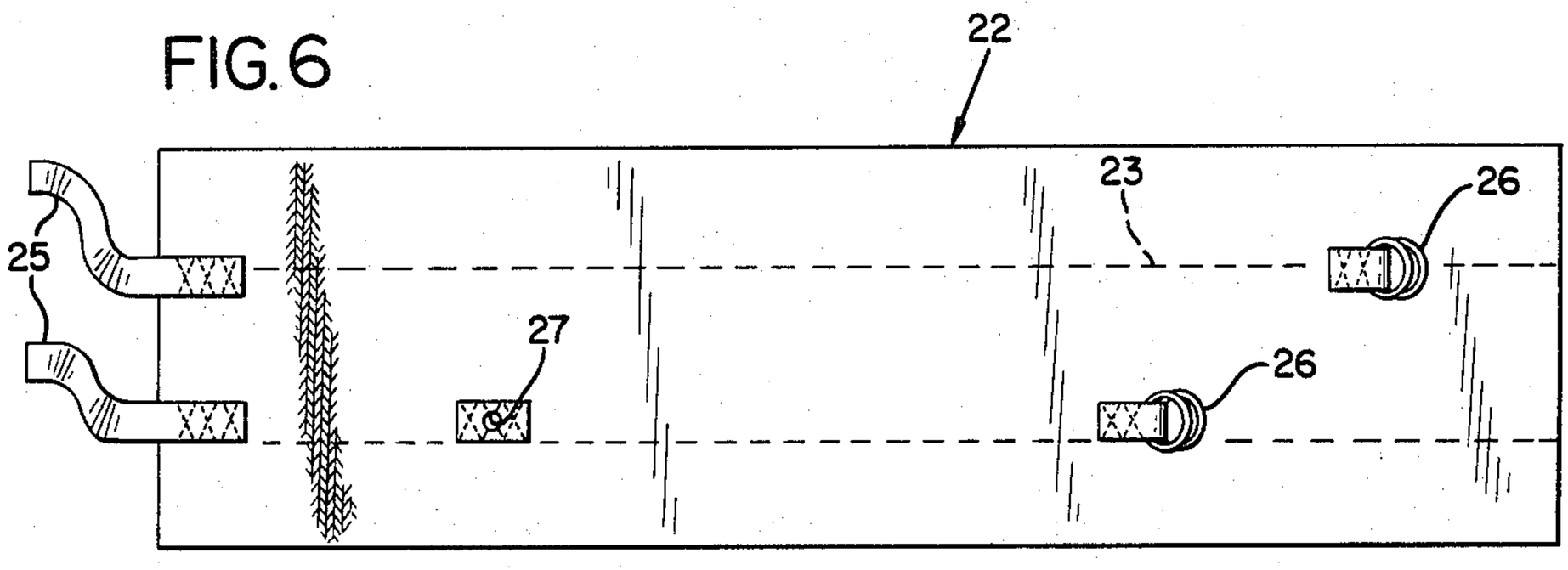
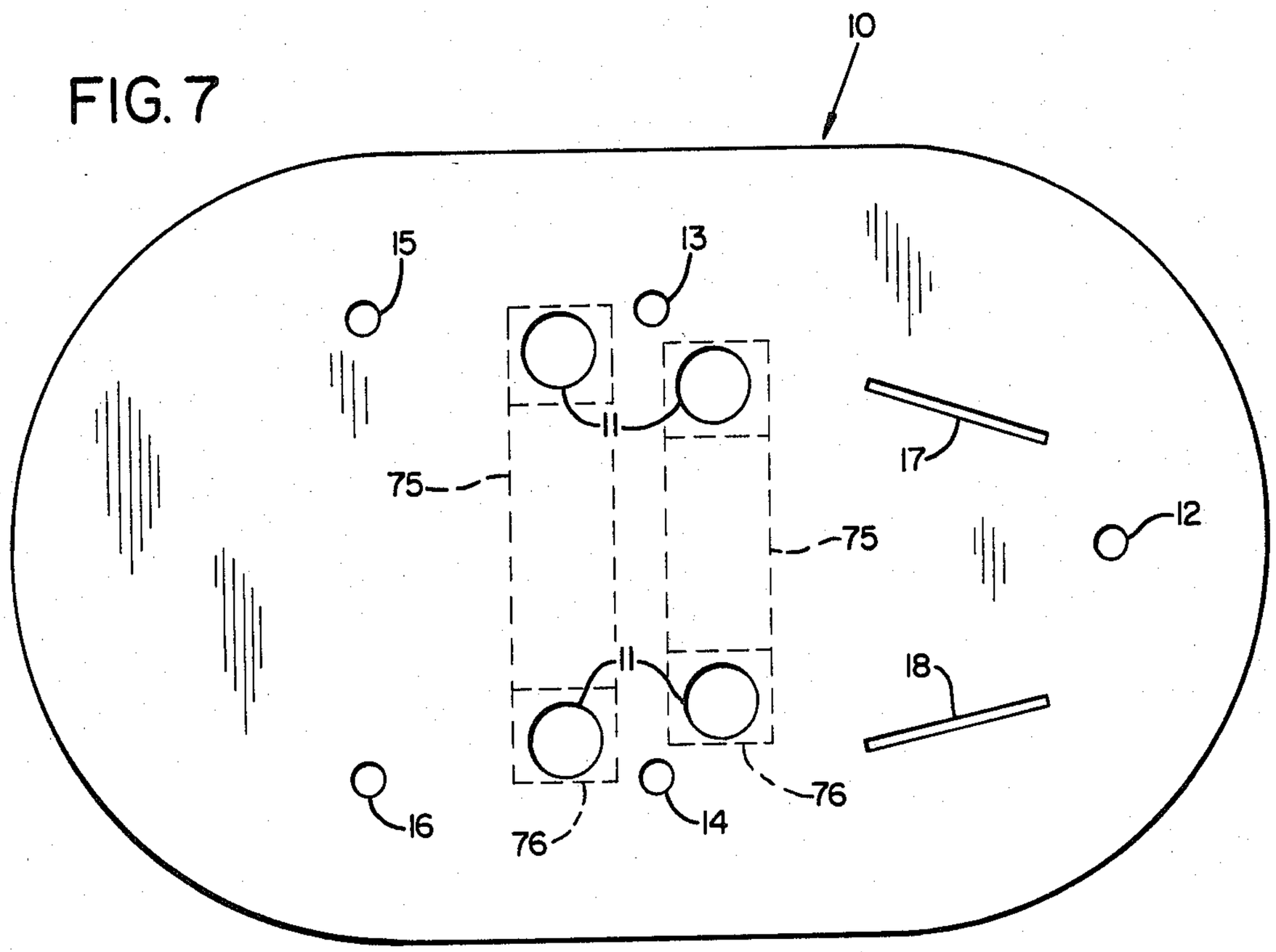


FIG. 7



MUD WALKER

This invention relates to an attachment for a shoe or boot to enable a person to walk on deep mud without sinking in.

BACKGROUND OF THE INVENTION

Just as snowshoes enable a person to walk on loose snow there is a need for some device to enable a person to walk on mud flats of tide land, on marshes and on soft arctic tundras. It is desirable that the device be collapsible into a compact package for shipping and storage.

Such a device is needed by duck hunters, the oyster industry, fishermen in the bays of Alaska and for gathering shrimp and mud clams.

SUMMARY OF THE INVENTION

The present mud walker comprises a platform supported on its underside by an inflated resilient tube extending around the periphery of the platform and secured by strap loops. The top side of the platform is equipped with adjustable means of securement to the shoe or boot of the user. Vent holes in mid portions of the platform prevent suction effects under the platform when the foot is lifted. The device is collapsible into a compact package by deflating the pneumatic tube and folding down the shoe securement parts.

The resilient air-inflated tube provides not only the ability to stay on the surface of deep, soft mud but also has a leveling effect for walking on rough, hard ground making such walking much easier. When used in cranberry bogs the soft supporting cushion inflicts a minimum of damage to the crops.

The invention will be better understood and additional objects and advantages will become apparent from the following description of the preferred embodiment illustrated in the accompanying drawings. Various changes may be made in the details of construction and arrangement of parts and certain features may be used without others. All such modifications within the scope of the appended claims are included in the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a mud walker embodying the invention.

FIG. **2** is a side elevation view.

FIG. **3** is a fragmentary view on the line **3**—**3** in FIG. **1**.

FIG. **4** is a sectional view on the line **4**—**4** in FIG. **1**.

FIG. **5** is a sectional view on the line **5**—**5** in FIG. **1**.

FIG. **6** is a plan view of the cover for the inflated tube.

FIG. **7** is a top plan view of the platform.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIG. **7**, the platform **10**, which may be made of plywood or other suitable material, is provided with a number of holes for various purposes. There are four air vent holes **11**, a front strap hole **12**, two strap holes **13** and **14** on opposite sides at intermediate length and two strap holes **15** and **16** on opposite sides near the rear end. Near the front end are two toe belting slots **17** and **18**.

As best seen in FIGS. **4** and **5** the platform **10** is supported on a peripheral cushion member **20** comprising a resilient pneumatic tube **21** enclosed in a protective

nylon cloth tube **22**. Cloth tube **22** is preferably reinforced on its underside by a second layer of nylon cloth **23** stitched to cloth **22**. In the present embodiment pneumatic tube **21** is an inner tube designed for the tire on a wheel of a boat trailer. This inner tube has the usual valve stem **24** for inflation by a tire pump to the pressure desired.

The side edges of cloth **22** are stitched together on the top side of inner tube **21** and the opposite ends are secured together in overlapping relation by two strips of belting **25** on one end secured in D-rings **26** adjacent the other end as seen in FIG. **6**. The cloth **22** thus provides a replaceable wear-resistant covering for the inner tube **21**. Valve stem **24** projects through a reinforced hole **27** in the cloth layers **22** and **23**.

The cushion member just described is secured to the underside of platform **10** by five straps as shown in FIG. **1**. A front strap **31** is looped around the cushion member and passed through strap hole **12**. Near mid-length of the platform a left strap **32** passes around the cushion member and through strap hole **13** and a right strap **33** passes in a similar manner through strap hole **14**. Towards the rear of the platform strap **34** passes through strap hole **15** and strap **35** passes through strap hole **16**. One end of each strap is equipped with lock rings **36** for securement to the opposite end of the strap.

The means of adjustable securement of the shoe or boot heel is best shown in FIG. **1**. A pair of flanged rails **40** is secured to the top of the platform in parallel relation by screws **41** in the underside of the platform as shown in FIG. **3**. An adjustment plate **42** is slidable under the flanges of rails **40** and clamped in a selected position by a clamp bolt **43**. Adjustment plate **42** has a longitudinal slot to slide on the shank of bolt **43**, the slot having a series of enlargements **44** to receive a flange **45** on the bolt in different positions of adjustment.

A cleat **50** on adjustment plate **42** secures two lower arm **51** of a flexible heel belting **52**. Heel belting **52** has a pair of forward side wings **53** to fold around and overlie portions of the instep and ankle of the user as shown in FIG. **2**. This heel belting comprises an outside layer **54** of smooth water proof plastic having an inside cushion layer **55** of non-absorbent soft plastic material.

The back heel portion of heel belting **52** is equipped with a pair D-rings **60** and **61** and the lower side portions are equipped with a D-ring **62** on the right and a similar D-ring in a corresponding position on the left side. One end of a nylon strap **65** is anchored at the latter position for criss-crossing the instep and ankle as shown in FIG. **2** with the free end being secured to lock rings on the anchored end. Strap **65** holds the heel down securely on platform **10** without allowing the heel to rise as it does in a ski binding.

The toe of the shoe or boot **66** is secured by a toe belting **70** comprising a flat strip of plastic material having its central portion on the underside of platform **10** with its ends extending upward through slots **17** and **18**. These ends are secured over the toe of the shoe or boot by a strap **71** similar to the strap **65** which passes through D-rings **72** on opposite sides of the foot and is secured by D-ring fastening means.

Air vent holes **11** allow outside air to pass into the space under the platform which is enclosed by the cushion ring **20** so that the platform may be readily lifted in walking without producing a suction effect. A pair of baffle plates **75** on top of the platform have raised ends **76** projecting above the holes **11** to maintain the air passageways through these holes clear and open.

Thus the hollow cushion **20** provides a large area of contact to support the user on the surface of soft mud and this area of contact may be adjusted for different conditions by the amount of air pressure pumped into inner tube **21** through valve stem **24**. Also, in an extreme condition of softness of the mud surface the underside of platform **10** provides considerable additional supporting surface when necessary. Under all conditions the vent holes **11** prevent any suction effect to resist lifting of the foot.

Another advantage of the present form of construction is its compactness for shipping and storage. The heel and toe securement means **52** and **70** fold down against the top of platform **10** and when the air is let out of tube **21** the cushion **20** flattens against the under side of the platform to made a compact package.

In the event of a puncture in tube **21** the straps **25** are released from rings **26** and valve stem **24** is withdrawn from hole **27** in cloth tube **22**. Then the tube **21** may be pulled around in cloth tube **22** to expose the puncture in a space between the separated ends of the cloth tube so that the puncture may be repaired.

The same mud walker is used for both the left foot and the right foot. There is no strap **25** on the left side of the mud walker to catch on the strap **25** or ring **26** on the other foot.

What is claimed is:

1. A mud walker comprising a platform, an elliptical flexible compressed air tube supporting only marginal portions of said platform, an air connection for inflating said tube with compressed air, a flexible and inelastic protective covering on said compressed air tube, means securing said compressed air tube and covering to said marginal portions of the underside of said platform leaving an open space under the center of the platform, air vent holes in said central portion of said platform spaced away from said compressed air tube and communicating with said open space under the platform, baffles spaced above said air vent holes, and means on the upper side of said platform for attachment to the foot of a wearer.

2. A mud walker as defined in claim **1**, said means securing said compressed air tube and covering to said platform comprising straps passing through holes in said platform.

3. A mud walker as defined in claim **2**, said straps and said compressed air tube and covering being removable from said platform and said covering being removable from said compressed air tube.

4. A mud walker as defined in claim **1**, said attachment means comprising toe and heel securement means to hold the toe and heel portions of the wearer's foot firmly against said platform.

5. A mud walker as defined in claim **1**, said toe securement means comprising a pair of flexible wings extending upward from said platform, and strapping interconnecting said wings across said toe portion of the wearer's foot.

6. A mud walker as defined in claim **4**, said heel securement means comprising a flexible rear heel wing extending upward from said platform, a pair of flexible side heel wings connected to opposite side edges of said rear wing, strapping fastening and guide means on said wings, and strapping in said fastening and guide means to cross over the instep and ankle of the wearer's foot.

7. A mud walker as defined in claim **6** including cushion material on the inside surfaces of said wings.

8. A mud walker as defined in claim **6** including foot length adjustment means for said heel securement means.

9. A mud walker as defined in claim **8**, said adjustment means comprising a pair of guides on said platform, an adjustment plate slidable in said guides, means to secure said plate in adjusted position, and means to fasten the lower end of said rear heel wing to said adjustment plate.

10. A mud walker as defined in claim **1** said platform comprising a plywood panel.

* * * * *